Intelligent Frac (iFRAC)

J2ME Release

User Manual

Version 1.2.0

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Getting Started

Introduction

Frac is a 3D packing (TETRIS−like) game where you just pack rectangular prisms having at least two reebs of same size. A complete board layer (i.e. no spaces) is discarded, adding points to the score with a chance to see obscured board pieces. The faster you drop the block, the more bonus you get to the score.

The following table shows the list of compatible devices J2ME devices. *Nokia 7650 / 3650 / 92x0 support is implemented with natural Symbian OS applications discussed in a separate manual*.

Device \ Feature	Background Images	Sound effects	Sound volume	Back light effects	Demo Mode	Customised keys
Nokia 3410 / 3510i	−	−	−	Attempted	−	−
Nokia 7210 / 6610	1	Tone	−	Attempted	Yes	−
Siemens SL45, M50, C55	−	−	−	Attempted	Yes	−
Motorola T720	1	−	−	−	Yes	−
Motorola A830	2	Wave	Attempted	−	Yes	−
Motorola i95cl	1	MIDI	−	−	Yes	−
Nokia 7650 / 3650 / 92x0 (separate manual)	2	Wave	Attempted	Attempted	Yes	Yes

Comments
1. An application can use up to 2 background images inside and outside game, a single image is used while playing game.
2 *Attempted* means that the application will use a particular feature if available.
3. *Full screen mode* is used with all Nokia models: command line does not appear, so that full screen is used by the application, while command buttons are still operational.
4. Background music is currently not supported.

History

FRAC was invented by ***Max Tegmark*** and ***Per Bergland***, two young and talented Sweeds who also called themselves **`Simsalabim Software`** . The game was apparently named after Mandelbrot fractal, used as the background for the original release for Mac in 1990, and later MS DOS (EGA 640x350x16).

I was very frustrated when my new computer happened to be too fast for FRAC, and felt a need to do something about that ... which could also be a nice present for Linux community. The 'new generation' of FRAC (named **ifrac**, or **Intelligent FRAC**) was released in 2000 for Linux svgalib and X11. It supported a range of screen resolutions and colour modes (4 to 32 bpp).

Though it was not planned originally, after numerous emails (including ones from Max and Per), I released a Windows 95+ port of the game (2001), which happened to become a kind of Linux rep in Windows world.

The current version is based on the Palm port of the game v 1.0.1 released earlier this month (August 2002). As compared to Linux/Windows release, I made the conditions more relaxed, and changed the scoring system to encourage skipping levels, or starting with a non−empty board. This modifications were inherited by the current version.

This edition is released with the permission from the original authors .

Support

The application web page is: http://ifrac.tripod.com/j2me

Send your feedback (comments, bug reports) to Michael Glickman <palmcrust@yahoo.com>

Other links relevant to iFRAC:

For Symbian™ OS: http://ifrac.tripod.com/symb

For Palm™ and compatibles: http://ifrac.tripod.com/palm

For Linux, X11 and Windows: http://ifrac.tripod.com/pc

More software products from us: http://palmcrust.tripod.com

Rules

Speed Levels.

While a block is "in the air", it drifts down according to current speed level. Speed level is a number from 1 to 9 shown in the top corner of the screen opposite to score board. The time−out between two consecutive drifts varies from 2.5 sec on level 1 to 0.2 sec on level 9. The speed level increments after a designated number of levels is completed, which for score below 10000 is:

Level	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Layers	2	3	4	5	6	5	4	3	2

while number of layers is incremented by 1 with each 10000 of the score.

A registered copy rolls over speed level from 9 back to starting level, while an unregistered copy never leaves level 9, once it is reached.

You can increase level before completing required number of layers, by entering LEVEL command. Though this does not affect your score immediately, you will pick up score faster, because the remaining layers are completed at a higher speed level thus contributing more to the score. .

Scoring.

Maximum Score.

The maximum score is **999999** . Game terminates if your score is over it. Hopefully this will never happen :=)

Score for a landed block.

Every landed (dropped or rested) block adds to score a value shown as Bonus on the score board. The bonus starts from 20, and decrements with any down drift, while being unaffected by a move down as a result of LOWER command.

Score for completed layers.

At speed level 1:

Layers:	**1**	**2**	**3**	**4**
Points:	100	300	600	1000

For higher speed levels the above numbers are multiplied by a factor:

Level	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**

Factor	1.125	1.25	1.375	1.5	1.625	1.75	1.875	2

100 points are added to score with each rollover.

Bonus for a non−empty board.

If a game starts with a non−empty board, you get an initial bonus depending on the number of "dirty" layers:

Layers:	**1**	**2**	**3**	**4**	**5**
Bonus:	500	1000	1750	3500	4500

Operating the Application

Key names used in the manual

Command buttons (a.k.a **Soft keys)**	Two keys located just below the screen. Standard applications typically mark *left* command button as `Select or Options`, *right* command button as `Back`. Motorola devices also have *middle* command button marked as `Menu`. Here the buttons are used in a slightly different context.
Joystick	Keys Left, Right, Up and Down located in the form of joystick.
Send key	A key with a green handset on it. Sometimes referred as **Yes** key.
Phone keys	Keys 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 , * and #.
FIRE	This action is often associated with SEND key (with a green picture of handet), hoever some devices might have a different assignment.

Using keys

During a game.

Key / button	Action / Default Action
Left command button (Options)	Next Level
Right command button (Back)	Quit
Middle command button (Menu − Motorola only)	Sound available: Sound off/on (see comments). Sound unavailable: equivalent to `[#]` key.
Send key	Sound available while middle command button is unavailabe: Sound on/off (see comments). All other cases: turn in "normal" direction
Joystick	Move current block horizontally (left, right, back, upfront)

`1 2 3`
`4 6`
`7 8 9`
	Move current block horizontally. Corner keys move a block diagonally, e.g
	1 − move back−left.

`FIRE or 5`	Turn in 'normal' direction
`*`	Turn in opposite direction
`0`	Move current block down.
#	Move current block down, if pressed for longer (causing auto−repeat) then drop it. For a device that doesn't support auto−repeat, or if 'Delayed Drop'

	is set to 'no' the block just drops.

Comments.
Sound on/off allows to suspend and resume sound without leaving current game . For permanent sound preferences see Settings .

Board scan

You can stop scanning the board after completing layer(−s) by pressing either Off−Hook, or On−Hook, or one of command buttons.

Main menu

Use Up and Down arrows to change highlighted item, FIRE or left command button to select highlighted item, right command button to quit.

Alternatively press a numeric key according to menu item number (the item might not be highlighted)

Between games

To operate and intergame screen (high scores, submission codes, etc) use command buttons according to the labels.

World−Wide Score

If your score is at least 6000 (this value may change in future), and among top 3 of your personal top scores (i.e. top scores stored on the current device), you are given a code for submitting your result to the World−Wide Score Table. In order to succeed, the result should be among 30 world top scores. You don't need to be a registered user for score submission.

The submission details (date, score and code) are stored in the local data base. To overview the details, select `Top Scores` from the Main Menu, and then press `Codes`(left) command button

Settings

This section (if available) allows to customize the following features:

Start level − starting speed level (default − 1)

'Dirty' layers − number of non−empty layers when game starts (default − 0)

Sound mode − Off / Normal / Annoying

Different sound signals are produced for the following cases

1. Block drifts down
2. Block is dropped
3. Block stops
4. Full layers are released
5. Level advance
6. End of game
7. New top score / submission entry.

In *Annoying* mode all sounds are produces. If this annoys you, switch to *Normal* mode, where first three (most often) sounds are not generated. And if you are still annoyed, select *Off* for a complete silence.

Sound volume − Low / Average / High

Low: 1/4 of full (maximum) volume
Average: 1/2 of full volume
High: "just" full volume

Delayed drop − Yes / No

HASH [#] key can work in one of the following ways:

Delayed drop is No: drop current block immediately
Delayed drop is Yes: moves current block down, and drops when the key is kept pressed for longer

Though **`Yes`** is more convenient (and is the default option), you might find **`No`** option more efficient for picking up score.

For a device that does not support auto−repeat, this parameter is not shown, and [#] always drops a block immediately.

Just a hint: you can always move a block down (and avoid drop) with [0] key.

Known Bugs

Nokia 7210

*The following bugs are noticed with **old** Nokia 7210 devices. You shouldn't have any problems with recent units.*

Unable to run application message is related to a small heap size. It is noticed to hapen regularly on an uregistered version when you attempt to play game after viewing top scores. However if you start application with playing the game (even if the game is terminated soon), you can mix viewing scores and playing game without problem. The messsage has a much lower chance to happen on an unregistered version.

A grey line on the top of screen appears when you go to registration form, and then enter Cancel for playing the game. This bug is definitely related to Nokia software, and obviously does not happen on a registered version.

Motorola T720

Some early T720 releases have a terrible ***memory leak*** which makes in impossible to run the application. The Motorola is working on that, and hopefully it has been fixed by now.

Delayed screen refresh in demo mode and high speed level. In play mode it works properly.

Registration

Where and how

You can purchase the product for **$12.95 US** from http://www.handandgo.com

While registering the product, you will have to quote the ***user name***. This name will appear as *Licenced to* name. You will be given a code (referred to as *registration code*), that you will have to enter along with the user name (see Entering and activating registration details).*The registration code for the given user name is valid for all future releases of the application..*

The code consists of 12 capital letters or number. *It may include letters* **O** *and* **I** *, but never numbers* 0 *or* 1. To enter the registration code, select `Configuration` from the main menu, then choose `Register` sub−item. You will have to restart the application to activate the registration code.

Advantage of registration.

As you can see, the application is void of nag screens or other deliberately annoying features.

There is only one significant advantage, you get after the registration: with an unregistered copy you find yourself trapped at level 9: once you reached this level, you can't leave it! As opposed to that, with a registered copy you only need to complete few layers on level 9 to rollover back to starting level and relax ! As a matter of fact, the rollover feature was introduced with PiFrac, while some players feel quite comfortable with previous FRAC releases, where there is not way relax at all!

The registered doesn't display registration notice − it goes straight to the Main Menu where it shows `Licensed to`<user name> . Also the registered copy does not show `UNREGISTERED` during the game.

If you are comfortable with a unregistered copy, you may also consider registration, to support our effort in creating first class software for PDA and mobile phones running on alternative patforms, which, as we believe, is the only way to ensure a healthy competition between different systems and methodologies. In particular, registration encourages further iFrac development.

Entering and activating registration details.

An unregistered copy starts with the Registration Notice. Press `Register` (left) button to get the registration form. Enter user name and corresponding registration code using your phone keys.

Use UP and DOWN keys to change edited field: User Name to Code and vice versa.

*For this release the both user name and codes are case **in**sensitive.*

Once the registration details are entered press Accept (left) button to confirm and quit the application. Restart the application to activate your registration details.